



# California HOV/Express Lane Business Transformation

## Strengthening California's congestion management toolbox with key statewide actions, enabling regions to improve HOV lanes.

In the early 1970's California began implementing an innovative demand-management strategy called "HOV Lanes" to encourage people to carpool and reduce the number of vehicles on the increasingly congested bridges (Bay Area) and freeways (Los Angeles area). It was always envisioned that, as the congestion and carpooling grew, adjustments could be made to the HOV lane network to further congestion relief. Changes such as increasing occupancy or adjusting hours of operation, however, proved difficult to do without public upset. Understanding the potential impact and communicating the potential benefit were missing and changes were rarely made. By the year 2000, HOV lanes proved to be useful, moving more people and in less travel time than in mixed-flow lanes. Still, the demand on all lanes of the urban freeways is increasing to the point that more strategies are needed.

*Strategies that could significantly combat congestion are:*

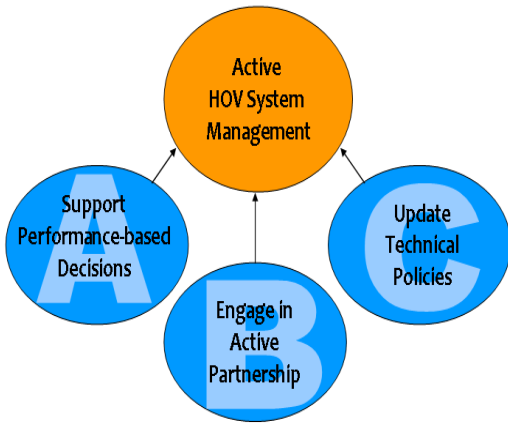
- Offset underutilization with tolling
- Create Dual-lane HOV and Express Lanes
- Increase carpool occupancy minimums
- Modified access designs
- Utilize more detection technologies for measurement and enforcement
- Implement Express Lanes
- Complete the HOV lane network
- Increase drop-ramps and direct-connectors
- Increase transit usage
- Combine HOV with broader System Management strategies
- Utilize entire roadway (including buffers and shoulders)

### Changing Landscape:

- By 2006, the transportation environment is focusing more on system-management & congestion pricing. Federal support for HOT Lanes encouraged early projects in Houston, Minneapolis, and Seattle, and California regions began showing interest in HOT lane strategies. Orange County appealed to Caltrans asking to convert buffer-separated facilities to continuous-access striping (atypical for Southern California). Caltrans organized a HOV Summit in Irvine to bring together academia and industry experts to discuss the challenges and options ahead of us in making the HOV lane network even more productive given the increasing demand.
- The use of CSMP studies focus planning activities toward more system-minded operations, a key part of which is HOV and Express Lane strategies.
- In 2008, Los Angeles Metro and Caltrans were awarded Federal Congestion Relief Demonstration Project (\$217 million) to improve transit and implement Express Lanes on I-10 and I-110.
- Several metropolitan areas conduct HOT Studies to evaluate the strategy's potential in the region. Bay Area partners utilize results of MTC regional HOT Lane Study to propose legislative authority for an entire network of Express Lanes in the Bay Area.

### HOV/Express Lane Business Plan 2009:

- Caltrans' Business Planning project works with regional partners, FHWA, and CHP to debate the strategic challenges to transforming the HOV operations business into something more dynamic and modern. After issues from the draft Business Plan were addressed, one-on-one regional meetings confirmed buy-in.
- In 2009 Caltrans will begin to solve strategic challenges with the help of partners in four focus areas.
- By 2012 California will have the knowledge and tools to design a true HOV/Express Lane Development Plan. State policies will provide consistent boundaries and philosophies for regionally-specific projects.



## Making Strategic Improvements:

The state-level strategic actions needed to evolve the HOV/Express Lane business to optimize and balance traffic flow through System Management are categorized into Four Focus Areas . Actions have already begun in all Focus Areas and will require continued focus and resourcing to provide successful results. While Caltrans Traffic Operations is the lead on most Critical Actions, partner involvement is critical to success.

### HOW TECHNOLOGY WILL CONTRIBUTE:

- Automated enforcement and person counts
- Dynamic signing and ultimate Active Traffic Management
- Pilot project to open the shoulder in peak periods with ATMS will lead to space for dual-lane HOV/Express lanes
- PeMS and detection systems

### Focus A: Support Performance-based Decisions

- Improve data collection and analysis
- Improve decision-making knowledge with research and pilot projects

Outcome: Increase system performance with changes such as increased carpool occupancy requirements, multi-lane facilities, tolled Express Lanes.

### Focus B: Engage in Active Partnership

- Increase informal communication between partners
- Learn lessons and adopt best practices from initial interagency agreements
- Share and adopt best message material to increase the government's compelling common voice

Outcome: Potential new platform for partner interaction, partner authority/roles/responsibilities are win-win and largely consistent statewide. Consistent core message and language in outreach materials within Caltrans Traffic Operations Program initially, with partners ultimately. Public and political satisfaction.

### Focus C: Update Technical Policies and Regulations

- Update HOV Guidelines and other design/operating/approval standards
- Explore and clarify federal guidance and requirements for system changes
- Update State and federal tolling statutes as necessary

Outcome: Updated guidelines and standards address current questions on dual-lane facilities, access control, and toll collection. Title-21 and automated occupancy detection technology improvements enable open-road tolling.

Action	2009	2010	2011	2012
C: Update HOV Guidelines Phase 1(Design)	X	X		
C: Clear regulation/authority challenges (Title-21, FHWA, Legislative)	X	X	X	
A: Pilot Projects and Research	X	X		
L A: Update Monitoring and Project Processes		X	X	X
L C: Update HOV Guidelines Phase 2 (Operations, Design, Performance Measures)			X	X
B: Initial Interagency Agreements (District 7,8,11,12)	X	X	X	
L C: Update HOV Guidelines Phase 3 (Best Practice Roles/Responsibilities)				X